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(54) Title: LOADABLE POLYPHOSPHAZENE-COMPRISING PARTICLES FOR THERAPEUTIC AND/OR DIAGNOSTIC APPLICATIONS AND METHODS OF PREPARING AND USING THE SAME

(57) Abstract: Particles are provided for use in therapeutic and/or diagnostic procedures. The particles include poly[bis(trifluoroethoxy) phosphazene] and/or a derivatives thereof which may be present throughout the particles or within an outer coating of the particles. The particles can also include a core having a hydrogel formed from an acrylic-based polymer. Barium sulfate may also be provided to the core of the particles as a coating or absorbed within the core of the particles. The particles can be used to minimize blood flow to mammalian tissues by occluding at least a portion of a blood vessel of the mammal, or to deliver an active agent to a localized area within a body of a mammal by contacting a localized area with at least one of the particles. Further, the particles are useful in sustained release formulations including active agent(s) for oral administration, as tracer particles for injection into the bloodstream of a mammal or for use in enhanced ultrasound imaging. The particles may include agents for increasing density for achieving useful buoyancy levels in suspension.

WO 2006/046155 A3